 Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Halloween Activity**

**Calculus**

Work each problem. Then write the answers as an ordered pair (a, b) and follow the instructions for graphing on the sheet provided.

**Right Eye**

1. a. What is the value at which there is b. At what value is there a

a vertical asymptote of removable discontinuity in

? ?

2. a.  b. Find 



3. a. Evaluate:  b. Solve: 

**Plot the points from #1, 2, 3, and connect the points.**

**Left Eye**

4. a. What is the instantaneous rate of b. Find  when x = 1

change of  when x = -2? 

5. a. Find  when x = -2 b. Find the average rate of change

 of  on the interval [-1, -2].

6. a. What is the leading coefficient of b. Solve: 

?

**Plot the points from #4, 5, 6, and connect the points.**

**Nose**

7. a. What is the derivative of  b. Evaluate: 

where ?

8. a. Find the slope of  b. Evaluate: 

at (3, -4) and multiply it by .

9. a. What is the slope of a b. What is the slope of a line

horizontal line? perpendicular to ?

**Plot the points from #7, 8, 9, and connect the points.**

**Mouth**

10. a. Find the derivative of  b. What is the opposite of the

at (1, 2). Answer:  slope of  at (-1, 3)?

11. a. Find the derivative of  b. Evaluate: 

when x = 1 and divide your answer

by -4.

12. a. Evaluate:  b. Solve: 

13. a. Find the derivative of  b. Find the derivative of .

when ; round your answer to What is the coefficient of your

the nearest whole number. answer?

**Plot the points from #10, 11, 12, 13, and connect the points in order.**

